10/048,212
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     (FILE 'HOME' ENTERED AT 11:26:07 ON 17 JAN 2008)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 11:26:38 ON 17
     JAN 2008
L1            59 S (BSA FRAG?)
L2            23 DUPLICATE REMOVE L1 (36 DUPLICATES REMOVED)
L3             1 S L2 AND PEPSIN?

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ANSWER 4 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 4
AN 1962:50585 BIOSIS
DN PREV19623900000853; BA39:853
TI Electro-phoretic demonstration of specific enzyme substrate complex between pepsin and serum albumin. II. Inhibition of complex formation by acetyl-L-tryptophane and fatty acids.
AU CANN, JOHN R.
CS Univ. Colorado Med. Sch., Denver
SO JOUR BIOL CHEM, (1962) Vol. 237, No. 3, pp. 707-711.
DT Article
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB Electrophoretic analyses of pepsin-albumin mixtures have revealed inhibition of complexing between pepsin and BSA bovine serum albumin by acetyl-L-tryptophane and fatty acids. Enhanced complex formation between pepsin and "fatty-acid-free" BSA and HCl- or urea-treated BSA is negated by exposure of the substrates to sodium caprylate-caprylic acid. These experiments, which afford further evidence for the specificity of the electrophoretically demonstrable pepsin-BSA complex, are interpreted within the framework of the Linder-strm-Lang mechanism of proteolysis. ABSTRACT AUTHORS: Author
CC Enzymes - General and comparative studies: coenzymes 10802
IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics)
IT Parts, Structures, & Systems of Organisms
serum: blood and lymphatics
IT Chemicals & Biochemicals
acetyl-L-tryptophane; sodium; specific enzyme; serum albumin; fatty acids; pepsin [EC 3.4.23.1]
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
bovine (common)
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
RN 7440-23-5 (sodium)
9001-75-6 (pepsin)
9001-75-6 (EC 3.4.23.1)

ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1991:296532 BIOSIS
DN PREV199192017547; BA92:17547
TI POST-FEEDING INDUCTION OF TRYPSIN IN THE MIDGUT OF AEDES-AEGYPTI L. DIPTERA CULICIDAE IS SEPARABLE INTO TWO CELLULAR PHASES.
AU FELIX C R [Reprint author]; BETSCHART B; BILLINGSLEY P F; FREYVOGEL T A
CS DEP BIOL, IMP COLL SCI TECHNOL MED, PRINCE CONSORT RD, LONDON SW7 2BB, ENGL, UK
SO Insect Biochemistry, (1991) Vol. 21, No. 2, pp. 197-204.
CODEN: ISBCAN. ISSN: 0020-1790.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 25 Jun 1991
Last Updated on STN: 26 Jun 1991
AB The induction of trypsin activity in the midgut of the mosquito, Aedes aegypti, was studied following meals of chicken blood, and several protein and peptide diets. Various concentrations of bovine serum albumin (BSA) in 0.15 M NaCl stimulated trypsin activity, in a similar fashion to the initial increase observed after a normal blood meal. Trypsin synthesis was also initiated when Ae aegypti were fed on glutaraldehyde cross-linked BSA and on BSA fragments prepared by both pepsin and cyanogen bromide cleavage. Non-soluble proteins, in the form of glutaraldehyde-fixed erythrocyte ghosts, induced a delayed and reduced trypsin response, whilst small peptides from neutralized liver digests did not induce trypsin activity until 8-10 h after feeding. Metabolic inhibitors had varying effects on the post-feeding activity of trypsin stimulated by BSA feeding. Cycloheximide, a peptidyl transferase inhibitor prevented expression of all activity in vivo, whereas α-amanitin (RNA-polymerase inhibitor) did not affect trypsin activity in the first 10 h after feeding. At 20 μg/ml concentration in the diet, actinomycin D (RNA synthesis inhibitor) caused temporary superinduction followed by inhibition of trypsin activity, but at lower concentrations, the later phase of trypsin activity was inhibited. The results suggest that post-feeding induction of trypsin activity in Ae. aegypti is a two-phase process regulated at the midgut cellular level. The first phase of trypsin synthesis is stimulated by soluble proteins of variable molecular weights, and only involves translation of messenger RNA already available within the midgut cells. The second phase is stimulated by small peptides and requires complete synthesis of new mRNA from DNA.
CC Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Enzymes - Physiological studies 10808
Metabolism - Proteins, peptides and amino acids 13012
Nutrition - General dietary studies 13214
Nutrition - Proteins, peptides and amino acids 13224
Digestive system - Physiology and biochemistry 14004
Blood - General and methods 15001
Economic entomology - Animal pests 60012
Invertebrata: comparative, experimental morphology, physiology and pathology - Insecta: physiology 64076
IT Major Concepts
Digestive System (Ingestion and Assimilation); Enzymology (Biochemistry and Molecular Biophysics); Metabolism; Nutrition; Physiology
IT Miscellaneous Descriptors
BLOOD MEAL PROTEIN DIET PEPTIDE DIET CYCLOHEXIMIDE ALPHA AMANITIN ACTINOMYCIN D MESSENGER RNA DNA
ORGN Classifier
Diptera 75314
Super Taxa
Insecta; Arthropoda; Invertebrata; Animalia
Taxa Notes

Animals, Arthropods, Insects, Invertebrates

RN 9002-07-7 (TRYPSIN)
66-81-9 (CYCLOHEXIMIDE)
23109-05-9 (ALPHA-AMANITIN)
50-76-0 (ACTINOMYCIN D)

=>

ANSWER 15 OF 23 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 12

AN 1988:155592 BIOSIS

DN PREV198885079245; BA85:79245

TI MONOCLONAL ANTIBODIES TO BOVINE SERUM ALBUMIN AFFINITY AND SPECIFICITY DETERMINATIONS.

AU MOREL G A [Reprint author]; YARMUSH D M; COLTON C K; BENJAMIN D C; YARMUSH M L

CS MASSACHUSETTS INST TECHNOL, DEP CHEM ENGINEERING, ROOM 66-501, CAMBRIDGE, MA 02139, USA

SO Molecular Immunology, (1988) Vol. 25, No. 1, pp. 7-16.
CODEN: MOIMD5. ISSN: 0161-5890.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 22 Mar 1988
Last Updated on STN: 22 Mar 1988

AB A panel of 12 monoclonal antibodies (MAb) to bovine serum albumin (BSA) was developed and characterized as to their physicochemical and immunological properties. Affinity constants of the MAb varied over a wide range from 105 to 108 M-1. MAb were assembled into several groups of non- or minimally interacting antibodies by analysis of competitive binding experiments, and BSA domain and subdomain specificites of the MAb were assigned by analysis of results of MAb binding to purified BSA fragments. Further fine specificity delineation was accomplished by examination of cross-reactivity patterns to several mammalian albumins. The data suggest that some of the low affinity MAb recognize sites on different portions of the BSA molecule, indicating that similar epitopes exist on different domains of the BSA molecule.

CC Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Biophysics - Molecular properties and macromolecules 10506
Blood - Blood and lymph studies 15002
Immunology - General and methods 34502

IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Immune System (Chemical Coordination and Homeostasis)

IT Miscellaneous Descriptors
HUMAN MOUSE IMMUNOCHEMISTRY EPITOPES COMPETITIVE BINDING EXPERIMENTS

ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1980:210483 CAPLUS
DN 92:210483
OREF 92:34031a,34034a
ED Entered STN: 12 May 1984
TI Isolation and characterization of a peptic fragment of bovine serum albumin
AU Khan, M. Yahiya
CS J. N. Med. Coll., Aligarh Muslim Univ., Aligarh, 202 001, India
SO Indian Journal of Biochemistry & Biophysics (1980), 17(1), 18-20
CODEN: IJBBBQ; ISSN: 0301-1208
DT Journal
LA English
CC 6-3 (General Biochemistry)
AB Using a monomeric form of bovine serum albumin (BSA), a peptic fragment designated as BSA-P1-385 of the protein was isolated. The N- and C-terminal amino acid residues of the fragment, which is known to constitute the N-terminal 2/3 of the BSA mol. (i.e. 2 of the 3 domains of BSA), were aspartic acid and leucine, resp. As determined by gel filtration, the mol. weight of the fragment was .apprx.47,000. Some important hydrodynamic properties of BSA-P1-385, such as Stokes radius, frictional ratio, axial ratio, and diffusion coefficient, were calculated from its gel filtration behavior and are 2.93 + 10-7 cm, 1.23, 4.52, and 7.6 + 10-7 cm2/s, resp.
ST albumin pepsin fragment property
IT Chains, chemical
(domains of, of serum albumin, isolation by peptic degradation)
IT Diffusion
(of serum albumin peptic fragment)
IT Albumins, blood serum
RL: BIOL (Biological study)
(pepsin-produced fragment of, purification and properties of)
IT 9001-75-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with serum albumins, polypeptide fragment from)

ANSWER 16 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1973:68461 CAPLUS
DN 78:68461
OREF 78:10851a,10854a
ED Entered STN: 12 May 1984
TI Steroid binding properties of some peptide fragments of bovine serum albumin obtained on peptic digestion
AU Pearlman, William H.; Fong, I. F. F.
CS Sch. Med., Univ. North Carolina, Chapel Hill, NC, USA
SO Journal of Biological Chemistry (1972), 247(24), 8078-84
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
CC 6-3 (General Biochemistry)
AB To elucidate the structural characteristics of bovine serum albumin (BSA) which allow for steroid binding, BSA was digested with pepsin under conditions which afford maximal retention of steroid binding activity consistent with a maximal degree of peptide fragmentation. Digestion with pepsin, pH 3.0, for 2 hrs at 25° afforded a complex mixture of peptide fragments with mol. wts. of .apprx.14,000 (a major class of components), and 27,000 and 34,000 (minor classes) estimated on Na dodecyl sulfate gel electrophoresis of the digest. As much as 40 to 50% of the initial steroid binding activity was retained in the BSA digest; the steroids studied were progesterone, testosterone, and 17β-estradiol. Steroid binding activity was empirically defined as the product of the ratio of bound to unbound steroid times the reciprocal of the total protein or peptide concentration (g/l.) in an assay system containing Sephadex G-25 or G-10 under conditions of equilibrium The crude BSA digest was treated successively with 2% and 10% trichloroacetic acid (I); the resp. I-precipitable peptides were chromatographed on Sephadex G-75. The 2% I chromatog. fractions exhibited a relatively high progesterone binding activity, and also appreciable testosterone and estradiol binding, whereas successive chromatog. fractions of the 10% I fraction exhibited diminishing steroid binding activity. Binding activity correlated with the absorbance ratio, 280:258 nm, of the resp. chromatog. fractions, suggesting that peptide fragments which are richer in tyrosine tend to retain steroid binding activity to a greater degree. Although the bulk of the peptide material remains to be resolved, two peptide fragments, KL and VI, were isolated from the 2% I and 10% I fractions, resp. Peptide KL (mol. weight 10,050) is rich in tyrosine. The equilibrium constant, nk, for the formation of a complex of peptide KL with progesterone, testosterone, or 17β-estradiol at 25° was .apprx.0.44, 0.18, or 0.33 + 104 M-1, resp. peptide VI (mol. weight 2766) appears to be identical with the N-terminal or Asp fragment of BSA previously isolated by Peters and Hawn (1967). Peptide VI contains no tyrosine and exhibits very little steroid-binding activity.
ST steroid binding serum albumin peptide; protein steroid binding
IT Albumins, blood serum
RL: BIOL (Biological study)
(steroid binding by peptide fragments of)
IT Peptides, biological studies
RL: BIOL (Biological study)
(steroid binding by, from albumin digests)
IT 50-28-2, biological studies 57-83-0, biological studies 58-22-0
RL: BIOL (Biological study)
(peptides from albumin digest binding of)

ANSWER 16 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1973:68461 CAPLUS
DN 78:68461
OREF 78:10851a,10854a
ED Entered STN: 12 May 1984
TI Steroid binding properties of some peptide fragments of bovine serum albumin obtained on peptic digestion
AU Pearlman, William H.; Fong, I. F. F.
CS Sch. Med., Univ. North Carolina, Chapel Hill, NC, USA
SO Journal of Biological Chemistry (1972), 247(24), 8078-84
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
CC 6-3 (General Biochemistry)
AB To elucidate the structural characteristics of bovine serum albumin (BSA) which allow for steroid binding, BSA was digested with pepsin under conditions which afford maximal retention of steroid binding activity consistent with a maximal degree of peptide fragmentation. Digestion with pepsin, pH 3.0, for 2 hrs at 25° afforded a complex mixture of peptide fragments with mol. wts. of .apprx.14,000 (a major class of components), and 27,000 and 34,000 (minor classes) estimated on Na dodecyl sulfate gel electrophoresis of the digest. As much as 40 to 50% of the initial steroid binding activity was retained in the BSA digest; the steroids studied were progesterone, testosterone, and 17β-estradiol. Steroid binding activity was empirically defined as the product of the ratio of bound to unbound steroid times the reciprocal of the total protein or peptide concentration (g/l.) in an assay system containing Sephadex G-25 or G-10 under conditions of equilibrium The crude BSA digest was treated successively with 2% and 10% trichloroacetic acid (I); the resp. I-precipitable peptides were chromatographed on Sephadex G-75. The 2% I chromatog. fractions exhibited a relatively high progesterone binding activity, and also appreciable testosterone and estradiol binding, whereas successive chromatog. fractions of the 10% I fraction exhibited diminishing steroid binding activity. Binding activity correlated with the absorbance ratio, 280:258 nm, of the resp. chromatog. fractions, suggesting that peptide fragments which are richer in tyrosine tend to retain steroid binding activity to a greater degree. Although the bulk of the peptide material remains to be resolved, two peptide fragments, KL and VI, were isolated from the 2% I and 10% I fractions, resp. Peptide KL (mol. weight 10,050) is rich in tyrosine. The equilibrium constant, nk, for the formation of a complex of peptide KL with progesterone, testosterone, or 17β-estradiol at 25° was .apprx.0.44, 0.18, or 0.33 + 104 M-1, resp. peptide VI (mol. weight 2766) appears to be identical with the N-terminal or Asp fragment of BSA previously isolated by Peters and Hawn (1967). Peptide VI contains no tyrosine and exhibits very little steroid-binding activity.
ST steroid binding serum albumin peptide; protein steroid binding
IT Albumins, blood serum
RL: BIOL (Biological study)
(steroid binding by peptide fragments of)
IT Peptides, biological studies
RL: BIOL (Biological study)
(steroid binding by, from albumin digests)
IT 50-28-2, biological studies 57-83-0, biological studies 58-22-0
RL: BIOL (Biological study)
(peptides from albumin digest binding of)

ANSWER 3 OF 26 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1991:296532 BIOSIS
DN PREV199192017547; BA92:17547
TI POST-FEEDING INDUCTION OF TRYPSIN IN THE MIDGUT OF AEDES-AEGYPTI L. DIPTERA CULICIDAE IS SEPARABLE INTO TWO CELLULAR PHASES.
AU FELIX C R [Reprint author]; BETSCHART B; BILLINGSLEY P F; FREYVOGEL T A
CS DEP BIOL, IMP COLL SCI TECHNOL MED, PRINCE CONSORT RD, LONDON SW7 2BB, ENGL, UK
SO Insect Biochemistry, (1991) Vol. 21, No. 2, pp. 197-204.
CODEN: ISBCAN. ISSN: 0020-1790.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 25 Jun 1991
Last Updated on STN: 26 Jun 1991
AB The induction of trypsin activity in the midgut of the mosquito, Aedes aegypti, was studied following meals of chicken blood, and several protein and peptide diets. Various concentrations of bovine serum albumin (BSA) in 0.15 M NaCl stimulated trypsin activity, in a similar fashion to the initial increase observed after a normal blood meal. Trypsin synthesis was also initiated when Ae aegypti were fed on glutaraldehyde cross-linked BSA and on BSA fragments prepared by both pepsin and cyanogen bromide cleavage. Non-soluble proteins, in the form of glutaraldehyde-fixed erythrocyte ghosts, induced a delayed and reduced trypsin response, whilst small peptides from neutralized liver digests did not induce trypsin activity until 8-10 h after feeding. Metabolic inhibitors had varying effects on the post-feeding activity of trypsin stimulated by BSA feeding. Cycloheximide, a peptidyl transferase inhibitor prevented expression of all activity in vivo, whereas α-amanitin (RNA-polymerase inhibitor) did not affect trypsin activity in the first 10 h after feeding. At 20 μg/ml concentration in the diet, actinomycin D (RNA synthesis inhibitor) caused temporary superinduction followed by inhibition of trypsin activity, but at lower concentrations, the later phase of trypsin activity was inhibited. The results suggest that post-feeding induction of trypsin activity in Ae. aegypti is a two-phase process regulated at the midgut cellular level. The first phase of trypsin synthesis is stimulated by soluble proteins of variable molecular weights, and only involves translation of messenger RNA already available within the midgut cells. The second phase is stimulated by small peptides and requires complete synthesis of new mRNA from DNA.
CC Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Enzymes - Physiological studies 10808
Metabolism - Proteins, peptides and amino acids 13012
Nutrition - General dietary studies 13214
Nutrition - Proteins, peptides and amino acids 13224
Digestive system - Physiology and biochemistry 14004
Blood - General and methods 15001
Economic entomology - Animal pests 60012
Invertebrata: comparative, experimental morphology, physiology and pathology - Insecta: physiology 64076
IT Major Concepts
Digestive System (Ingestion and Assimilation); Enzymology (Biochemistry and Molecular Biophysics); Metabolism; Nutrition; Physiology
IT Miscellaneous Descriptors
BLOOD MEAL PROTEIN DIET PEPTIDE DIET CYCLOHEXIMIDE ALPHA AMANITIN ACTINOMYCIN D MESSENGER RNA DNA
ORGN Classifier
Diptera 75314
Super Taxa
Insecta; Arthropoda; Invertebrata; Animalia

Taxa Notes
Animals, Arthropods, Insects, Invertebrates
RN 9002-07-7 (TRYPSIN)
66-81-9 (CYCLOHEXIMIDE)
23109-05-9 (ALPHA-AMANITIN)
50-76-0 (ACTINOMYCIN D)

ANSWER 7 OF 26 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 1978:134005 BIOSIS

DN PREV197865021005; BA65:21005

TI IMMUNO SUPPRESSIVE PROPERTIES OF A PEPTIC FRAGMENT OF BOVINE SERUM ALBUMIN.

AU MUCKERHEIDE A [Reprint author]; PESCE A J; GABRIEL MICHAEL J

CS DEP MICROBIOL, UNIV CINCI COLL MED, CINCINNATI, OHIO 45267, USA

SO Journal of Immunology, (1977) Vol. 119, No. 4, pp. 1340-1345. CODEN: JOIMA3. ISSN: 0022-1767.

DT Article

FS BA

LA ENGLISH

2-4 fragments produced.

AB The immunogenic properties of a peptic fragment of BSA [bovine serum albumin] were investigated. BSA was subjected to limited proteolysis by pepsin and the resulting fragments were separated on DEAE cellulose. The fragment under consideration, fraction Ia (MW 8000-10,000), did not precipitate with anti-BSA serum but did inhibit the binding of specific antibody to labeled BSA, indicating the presence of determinants found on the native antigen. BDF1 mice immunized with fraction Ia in Al (OH)3 gel or in complete Freund's adjuvant produced no significant antibody response as measured by passive cutaneous anaphylaxis (PCA) or by a modified Farr assay. The fragment elicited a PCA reaction in mouse skin sensitized with anti-BSA serum. Treatment of mice with single doses of fraction Ia at various time intervals before immunization with BSA resulted in significant suppression of the formation of anti-BSA antibody. The conditions of suppression of the Ig[immunoglobulin]E response by the peptic fragment were studied in greater detail. Such suppression probably can be attributed to the presence of specific T [thymus-derived] suppressor cells.

CC Radiation biology - Radiation and isotope techniques 06504
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry methods - Carbohydrates 10058
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Enzymes - Methods 10804
Movement 12100
Pathology - Inflammation and inflammatory disease 12508
Metabolism - Carbohydrates 13004
Metabolism - Proteins, peptides and amino acids 13012
Blood - Blood and lymph studies 15002
Endocrine - Thymus 17016
Integumentary system - Pathology 18506
Physiology and biochemistry of bacteria 31000
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508
Allergy 35500

IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Endocrine System (Chemical Coordination and Homeostasis); Immune System (Chemical Coordination and Homeostasis)

IT Miscellaneous Descriptors
MOUSE COMPLETE FREUNDS ADJUVANT SUPPRESSED IMMUNO GLOBULIN E RESPONSE SUPPRESSOR THYMUS DERIVED CELLS

ORGN Classifier
Actinomycetes and Related Organisms 08800
Super Taxa
Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms

ORGN Classifier
Bovidae 85715

ANSWER 7 OF 26 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1978:134005 BIOSIS
DN PREV197865021005; BA65:21005
TI IMMUNO SUPPRESSIVE PROPERTIES OF A PEPTIC FRAGMENT OF BOVINE SERUM ALBUMIN.
AU MUCKERHEIDE A [Reprint author]; PESCE A J; GABRIEL MICHAEL J
CS DEP MICROBIOL, UNIV CINCI COLL MED, CINCINNATI, OHIO 45267, USA
SO Journal of Immunology, (1977) Vol. 119, No. 4, pp. 1340-1345.
CODEN: JOIMA3. ISSN: 0022-1767.
DT Article
FS BA
LA ENGLISH
AB The immunogenic properties of a peptic fragment of BSA [bovine serum albumin] were investigated. BSA was subjected to limited proteolysis by pepsin and the resulting fragments were separated on DEAE cellulose. The fragment under consideration, fraction Ia (MW 8000-10,000), did not precipitate with anti-BSA serum but did inhibit the binding of specific antibody to labeled BSA, indicating the presence of determinants found on the native antigen. BDF1 mice immunized with fraction Ia in Al (OH)3 gel or in complete Freund's adjuvant produced no significant antibody response as measured by passive cutaneous anaphylaxis (PCA) or by a modified Farr assay. The fragment elicited a PCA reaction in mouse skin sensitized with anti-BSA serum. Treatment of mice with single doses of fraction Ia at various time intervals before immunization with BSA resulted in significant suppression of the formation of anti-BSA antibody. The conditions of suppression of the Ig[immunoglobulin]E response by the peptic fragment were studied in greater detail. Such suppression probably can be attributed to the presence of specific T [thymus-derived] suppressor cells.
CC Radiation biology - Radiation and isotope techniques 06504
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry methods - Carbohydrates 10058
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Enzymes - Methods 10804
Movement 12100
Pathology - Inflammation and inflammatory disease 12508
Metabolism - Carbohydrates 13004
Metabolism - Proteins, peptides and amino acids 13012
Blood - Blood and lymph studies 15002
Endocrine - Thymus 17016
Integumentary system - Pathology 18506
Physiology and biochemistry of bacteria 31000
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508
Allergy 35500
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Endocrine System (Chemical Coordination and Homeostasis); Immune System (Chemical Coordination and Homeostasis)
IT Miscellaneous Descriptors
MOUSE COMPLETE FREUNDS ADJUVANT SUPPRESSED IMMUNO GLOBULIN E RESPONSE SUPPRESSOR THYMUS DERIVED CELLS
ORGN Classifier
Actinomycetes and Related Organisms 08800
Super Taxa
Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715

Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ANSWER 8 OF 26 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1967:55184 BIOSIS
DN PREV19674800055184; BA48:55184
TI Immunochemical studies of the tryptic, chymotryptic and peptic peptides of heat denatured bovine serum albumin.
AU LIU, C. T.; DAS, B. R.; MAURER, P. H.
CS N. J. Coll. Med. and Dent., Jersey City, N. J., USA
SO IMMUNOCHEMISTRY, (1967) Vol. 4, No. 1, pp. 1-10.
DT Article
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB An immune system, viz. heat denatured bovine serum albumin (HDBSA) and rabbit anti-HDBSA was studied to learn the nature of the antibody combining sites. Enzyme (trypsin, chymotrypsin, pepsin) digested HDBSA yielded immunologically active peptides, which were dialyzable and non-dialyzable. The peptides had molecular weights ranging from 5000 to 100,000 and showed differences in amino acid composition. The immunological activity with anti-HDBSA sera was proportional to the mol. weight of the peptide. All active fractions, except those from peptic digests, also evoked passive cutaneous anaphylaxia (PCA) reactions in guinea pigs with antisera to native BSA. Ten to 20 times more weight of dialyzable fraction compared with non-dialyzable fraction was needed to produce equivalent inhibition of the homologous precipltin reaction and to evoke PCA reactions. Performate oxidation of HDBSA reduced immunological activity 50% and further peptic digestion abolished the ability to elicit the PCA reaction. Degradation of the trypsin resistant core of HDBSA with chymotrypsin yielded additional dialyzable peptides with molecular weights between 5000 and 10,000 having immunological activities. An immunologically active fragment of mol. weight about 7200 was isolated from the tryptic digest. The immunological findings are consistent with the concept that HDBSA is a partially extended molecule having antibody combining sites distributed among several areas on the surface rather than being restricted to one localized region. ABSTRACT AUTHORS: Authors
CC Immunology - General and methods 34502
IT Major Concepts
Immune System (Chemical Coordination and Homeostasis)
IT Parts, Structures, & Systems of Organisms
immune system: immune system; sera: blood and lymphatics; serum: blood and lymphatics
IT Chemicals & Biochemicals
pepsin [EC 3.4.23.1]; serum albumin; trypsin [EC 3.4.21.4]; chymotrypsin [EC 3.4.21.1]; antibody; amino acid
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
bovine (common)
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Caviidae 86300
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
guinea pigs (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
ORGN Classifier

ANSWER 8 OF 26 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1967:55184 BIOSIS
DN PREV19674800055184; BA48:55184
TI Immunochemical studies of the tryptic, chymotryptic and peptic peptides of heat denatured bovine serum albumin.
AU LIU, C. T.; DAS, B. R.; MAURER, P. H.
CS N. J. Coll. Med. and Dent., Jersey City, N. J., USA
SO IMMUNOCHEMISTRY, (1967) Vol. 4, No. 1, pp. 1-10.
DT Article
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB An immune system, viz. heat denatured bovine serum albumin (HDBSA) and rabbit anti-HDBSA was studied to learn the nature of the antibody combining sites. Enzyme (trypsin, chymotrypsin, pepsin) digested HDBSA yielded immunologically active peptides, which were dialyzable and non-dialyzable. The peptides had molecular weights ranging from 5000 to 100,000 and showed differences in amino acid composition. The immunological activity with anti-HDBSA sera was proportional to the mol. weight of the peptide. All active fractions, except those from peptic digests, also evoked passive cutaneous anaphylaxia (PCA) reactions in guinea pigs with antisera to native BSA. Ten to 20 times more weight of dialyzable fraction compared with non-dialyzable fraction was needed to produce equivalent inhibition of the homologous precipltin reaction and to evoke PCA reactions. Performate oxidation of HDBSA reduced immunological activity 50% and further peptic digestion abolished the ability to elicit the PCA reaction. Degradation of the trypsin resistant core of HDBSA with chymotrypsin yielded additional dialyzable peptides with molecular weights between 5000 and 10,000 having immunological activities. An immunologically active fragment of mol. weight about 7200 was isolated from the tryptic digest. The immunological findings are consistent with the concept that HDBSA is a partially extended molecule having antibody combining sites distributed among several areas on the surface rather than being restricted to one localized region. ABSTRACT AUTHORS: Authors
CC Immunology - General and methods 34502
IT Major Concepts
Immune System (Chemical Coordination and Homeostasis)
IT Parts, Structures, & Systems of Organisms
immune system: immune system; sera: blood and lymphatics; serum: blood and lymphatics
IT Chemicals & Biochemicals
pepsin [EC 3.4.23.1]; serum albumin; trypsin [EC 3.4.21.4]; chymotrypsin [EC 3.4.21.1]; antibody; amino acid
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
bovine (common)
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Caviidae 86300
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
guinea pigs (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
ORGN Classifier

Leporidae 86040
Super Taxa
Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rabbit (common)
Taxa Notes
Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
RN 9001-75-6 (pepsin)
9001-75-6 (EC 3.4.23.1)
9002-07-7 (trypsin)
9002-07-7 (EC 3.4.21.4)
9004-07-3 (chymotrypsin)
9004-07-3 (EC 3.4.21.1)

Leporidae 86040
Super Taxa
Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rabbit (common)
Taxa Notes
Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
RN 9001-75-6 (pepsin)
9001-75-6 (EC 3.4.23.1)
9002-07-7 (trypsin)
9002-07-7 (EC 3.4.21.4)
9004-07-3 (chymotrypsin)
9004-07-3 (EC 3.4.21.1)

ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1980:210483 CAPLUS
DN 92:210483
OREF 92:34031a,34034a
ED Entered STN: 12 May 1984
TI Isolation and characterization of a peptic fragment of bovine serum albumin
AU Khan, M. Yahiya
CS J. N. Med. Coll., Aligarh Muslim Univ., Aligarh, 202 001, India
SO Indian Journal of Biochemistry & Biophysics (1980), 17(1), 18-20
CODEN: IJBBBQ; ISSN: 0301-1208
DT Journal
LA English
CC 6-3 (General Biochemistry)
AB Using a monomeric form of bovine serum albumin (BSA), a peptic fragment designated as BSA-P1-385 of the protein was isolated. The N- and C-terminal amino acid residues of the fragment, which is known to constitute the N-terminal 2/3 of the BSA mol. (i.e. 2 of the 3 domains of BSA), were aspartic acid and leucine, resp. As determined by gel filtration, the mol. weight of the fragment was .apprx.47,000. Some important hydrodynamic properties of BSA-P1-385, such as Stokes radius, frictional ratio, axial ratio, and diffusion coefficient, were calculated from its gel filtration behavior and are 2.93 + 10-7 cm, 1.23, 4.52, and 7.6 + 10-7 cm2/s, resp.
ST albumin pepsin fragment property
IT Chains, chemical
(domains of, of serum albumin, isolation by peptic degradation)
IT Diffusion
(of serum albumin peptic fragment)
IT Albumins, blood serum
RL: BIOL (Biological study)
(pepsin-produced fragment of, purification and properties of)
IT 9001-75-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with serum albumins, polypeptide fragment from)